

## ENT MIDDLE EAR IMPLANTS

### Reference Guide



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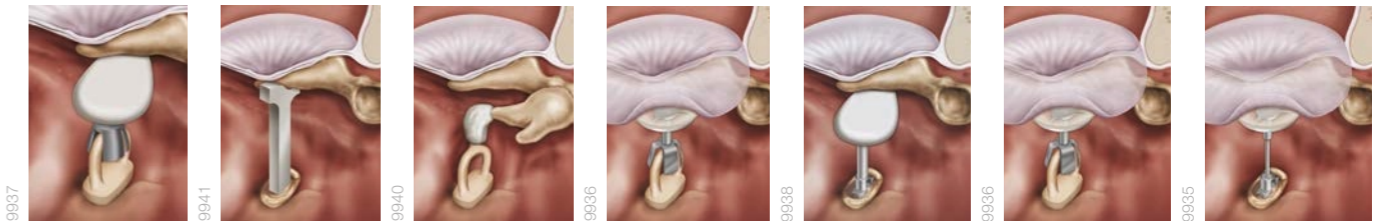
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IMPLANT MATERIALS



**Fluoroplastics**

Fluoroplastics are polymers composed of carbon and fluorine atoms. They come from a variety of different resins and are used in a wide range of industrial, medical, and home applications. Teflon is the brand name of one of the more popular varieties of fluoroplastic. Fluoroplastics are highly regarded by otologists for their inertness, smoothness of texture, and biocompatibility. Fluoroplastic parts are molded, machined from rods, or formed from tubing and sheeting. White and blue are the colors used by Olympus.

**Hydroxylapatite**

Hydroxylapatite is one of the most biocompatible materials available for implant use. Because its chemical composition resembles that of real bone, it is well tolerated by the human body. Additional stabilization of the reconstructed middle ear chain is provided by “ongrowth” (not bony ingrowth) onto the solid, dense surface of the material. Porous forms of this material (pore size of 150–350 microns) allow for bone ingrowth and/or soft tissue ongrowth.

**Nitinol**

Nitinol (nickel–titanium alloy) is a shape-memory metal alloy that has been used in medical applications for years. Since nitinol “self-fashions” with heat, the crimping maneuver is dramatically simplified.

**Micron**

Micron is an Olympus-patented finishing process for titanium implants. This proprietary chemical process not only smoothes the surface but also “dulls” it, which reduces glare.

**Platinum**

Platinum is a highly corrosive resistant material and a very ductile metal that is well tolerated by the body. Devices made from platinum wire or ribbon can easily be adjusted or crimped by a physician, and will retain their formed shape without “spring-back.”

**Polyethylene**

Polyethylene, which is composed of only carbon and hydrogen atoms, is a popular implant material used in a variety of microsurgery applications. Bioinertness and the ability to have smooth surfaces are but a few of the qualities that make polyethylene appropriate for otology implants. It is available in white and blue colors.

**Porous Polyethylene**

Porous polyethylene (Plasti-Pore) is formed by sintering many individual polyethylene resin particles. It permits tissue ingrowth into the interconnecting pores of the implant material. The base resin, polyethylene, is known to be a very inert material. The natural white color is the only one used by Olympus.

**Stainless Steel**

Stainless steel (ASTM F 138, Grade 2) is a special-quality implant-grade steel that has long been in use in medical implants. It has a balanced corrosion-resistant chemistry and an extremely clean microstructure. Stainless steel parts are machined from rods. Wire made of this material is also used for many other Olympus ENT products.

**Titanium**

Titanium (ASTM F 136) is used in many medical implants. It has excellent corrosion resistance and is well tolerated by tissue. The material is lightweight and MRI-compatible.

STAPES PROSTHESES IMPLANTS

Stapes Prostheses

Formerly Gyrus - now Olympus' commitment to stapes prostheses began in 1956 with the introduction of the first commercially available stapes implant. We have maintained our commitment to research and development in response to surgeons' interest in continually improving clinical outcomes and products. Working in conjunction with leading global otologic surgeons, we fashion our implants from a broad range of materials: Nitinol, titanium, platinum, stainless steel, Plasti-Pore, and fluoroplastic.



PISTONS

Armstrong-Style Pistons

This piston features an Armstrong-style platinum "ribbon" which resists "spring-back," permitting proper forceps closure on the incus. The flat cross section of the loop provides a wide area of contact to discourage point necrosis. The Plasti-Pore material shaft invites ingrowth for stabilizing the prosthesis in the oval window niche or on a tissue graft.

Platinum / Plasti-Pore Material

Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG140760	0.6 mm	3.50 mm	EG140770	0.8 mm	3.50 mm
EG140761	0.6 mm	3.75 mm	EG140771	0.8 mm	3.75 mm
EG140762	0.6 mm	4.00 mm	EG140772	0.8 mm	4.00 mm
EG140763	0.6 mm	4.25 mm	EG140773	0.8 mm	4.25 mm
EG140764	0.6 mm	4.50 mm	EG140774	0.8 mm	4.50 mm
EG140765	0.6 mm	4.75 mm	EG140776	0.8 mm	5.00 mm
EG140766	0.6 mm	5.00 mm			

De La Cruz Pistons

Shortened fluoroplastic shaft offers improved visibility during placement. The flat cross section of the loop provides a wide area of contact to discourage point necrosis.

Platinum / Fluoroplastic

Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG70140730	0.6 mm	3.50 mm	EG70140734	0.6 mm	4.50 mm
EG70140731	0.6 mm	3.75 mm	EG70140735	0.6 mm	4.75 mm
EG70140732	0.6 mm	4.00 mm	EG70140736	0.6 mm	5.00 mm
EG70140733	0.6 mm	4.25 mm			

Stainless Steel / Fluoroplastic

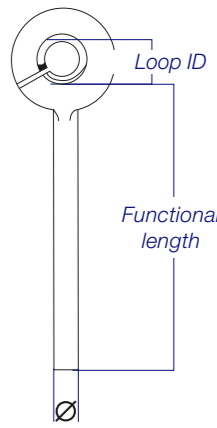
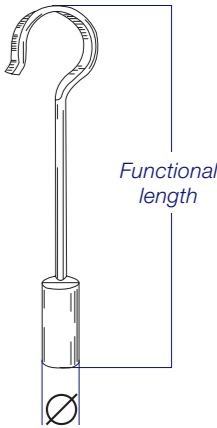
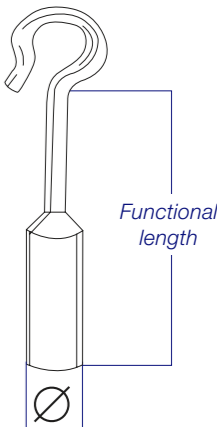
Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG70140727	0.6 mm	4.00 mm	EG70140729	0.6 mm	4.50 mm
EG70140728	0.6 mm	4.25 mm			

Cawthorne Pistons

The Cawthorne piston is designed for incus attachment with a very slim 0.3 mm diameter shaft.

Fluoroplastic

Article No.	Piston Diameter	Loop ID	Functional Length	Article No.	Piston Diameter	Loop ID	Functional Length
EG140266-ENT	0.3 mm	0.8 mm	4.50 mm	EG140268-ENT	0.3 mm	0.8 mm	5.00 mm

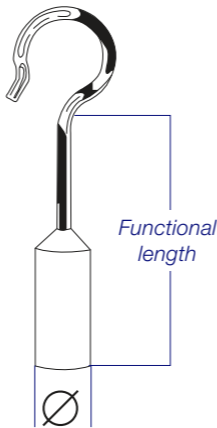


PISTONS

Richards Platinum Fluoroplastic Pistons

This design incorporates the popular fluoroplastic piston shaft with a platinum ribbon loop. Platinum is a well-tolerated, “obedient” metal that is easy to crimp with virtually no “spring-back.” The loop is a flat cross section (rather than round), providing a wide area of contact to discourage point necrosis and to provide superior grip.

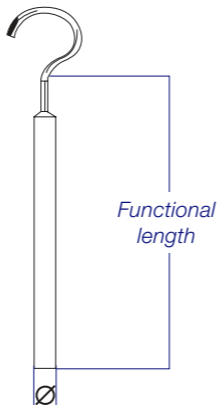
Platinum / Fluoroplastic					
Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG141812	0.4 mm	3.50 mm	EG140782	0.6 mm	3.75 mm
EG141813	0.4 mm	3.75 mm	EG140783	0.6 mm	4.00 mm
EG141814	0.4 mm	4.00 mm	EG140784	0.6 mm	4.25 mm
EG141815	0.4 mm	4.25 mm	EG140785	0.6 mm	4.50 mm
EG141816-ENT	0.4 mm	4.50 mm	EG140786	0.6 mm	4.75 mm
EG141817-ENT	0.4 mm	4.75 mm	EG140787	0.6 mm	5.00 mm
EG141818	0.4 mm	5.00 mm	EG140790	0.8 mm	3.50 mm
EG140813	0.5 mm	3.75 mm	EG140791	0.8 mm	3.75 mm
EG140814	0.5 mm	4.00 mm	EG140792	0.8 mm	4.00 mm
EG140815	0.5 mm	4.25 mm	EG140793	0.8 mm	4.25 mm
EG140816	0.5 mm	4.50 mm	EG140794	0.8 mm	4.50 mm
EG140817	0.5 mm	4.75 mm	EG140795	0.8 mm	4.75 mm
EG140781	0.6 mm	3.50 mm	EG140796	0.8 mm	5.00 mm



Fisch-Type Pistons

This adaptation of the piston prosthesis is designed for small fenestra techniques. The piston is available in a 6 mm length which can be conveniently trimmed to 3.5 mm using a sharp knife.

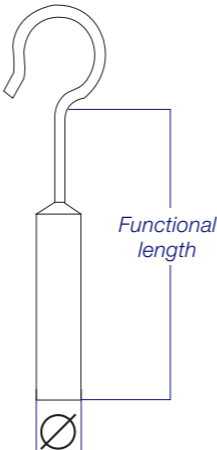
Platinum / Fluoroplastic <span>A</span>			Stainless Steel / Fluoroplastic <span>B</span>		
Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG140443	0.4 mm	6.00 mm	EG140444	0.4 mm	6.00 mm



Mass Eye and Ear Pistons

The round platinum shaft may be easily angulated. The flat ribbon crook maximizes surface contact with the incus while minimizing the risk of pressure necrosis of the long process.

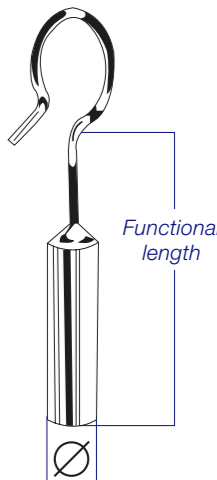
Fluoroplastic / Platinum					
Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG70140799	0.6 mm	4.00 mm	EG70140798	0.6 mm	4.50 mm
EG70140801	0.6 mm	4.25 mm			



McGee Shepherd's Crook Pistons

This unique hook shape is easier to install over the incus by offering clearer visualization of closure.

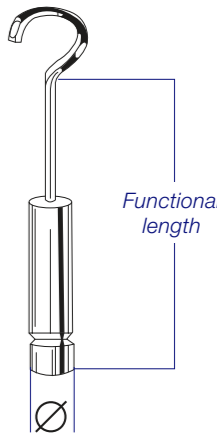
Stainless Steel		
Article No.	Piston Diameter	Functional Length
EG140475	0.6 mm	4.00 mm



McGee Pistons

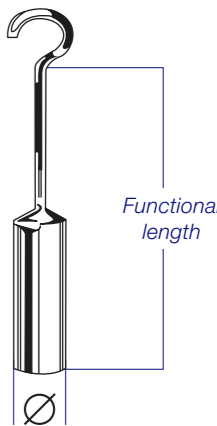
This improved version of the popular McGee piston features a platinum ribbon loop attached to a stainless-steel piston. Platinum offers good tissue tolerance and is easier to bend into shape. In its flattened form it permits a greater area of surface contact with the incus, lessening the opportunity for pressure necrosis. Each piston also includes a 0.5 mm depth groove to assist in visualization of footplate penetration. This groove is clearly visible at virtually any angle.

Platinum / Stainless Steel 0.5 mm Hash Mark <span>A</span>					
Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG140336	0.5 mm	3.75 mm	EG140330	0.6 mm	3.75 mm
EG140337	0.5 mm	4.00 mm	EG140331	0.6 mm	4.00 mm
EG140338	0.5 mm	4.25 mm	EG140332	0.6 mm	4.25 mm
EG140339	0.5 mm	4.50 mm	EG140333	0.6 mm	4.50 mm
EG140340	0.5 mm	4.75 mm	EG140334	0.6 mm	4.75 mm
EG140341	0.5 mm	5.00 mm	EG140335	0.6 mm	5.00 mm



Used for obliterative otosclerosis and in cases where the prognosis is poor if the classical fat-wire technique is used. One-piece construction.

Stainless Steel <span>B</span>					
Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG140161	0.6 mm	3.25 mm	EG140143-ENT	0.8 mm	3.75 mm
EG140162	0.6 mm	3.50 mm	EG140144-ENT	0.8 mm	4.00 mm
EG140163	0.6 mm	3.75 mm	EG140145-ENT	0.8 mm	4.25 mm
EG140164	0.6 mm	4.00 mm	EG140146-ENT	0.8 mm	4.50 mm
EG140165	0.6 mm	4.25 mm	EG140147-ENT	0.8 mm	4.75 mm
EG140166	0.6 mm	4.50 mm	EG140148-ENT	0.8 mm	5.00 mm
EG140167	0.6 mm	4.75 mm	EG140149	0.8 mm	5.25 mm
EG140168	0.6 mm	5.00 mm	EG140150-ENT	0.8 mm	5.50 mm



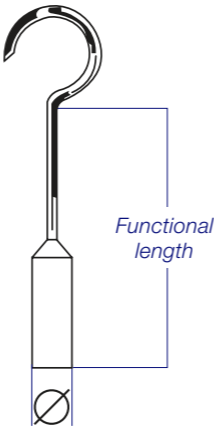
PISTONS

Scheer Pistons

A standard stainless-steel FLPL piston featuring a short, slim diameter.

Stainless Steel / Fluoroplastic

Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG140226	0.6 mm	3.33 mm	EG140229-ENT	0.6 mm	4.08 mm
EG140227	0.6 mm	3.58 mm	EG140230-ENT	0.6 mm	4.33 mm
EG140228-ENT	0.6 mm	3.83 mm	EG140231	0.6 mm	4.58 mm

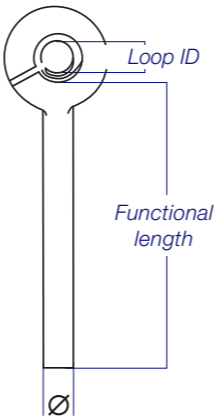


Fluoroplastic Pistons

Loop is expanded with a pick to slip over the incus with smooth jaw alligator forceps. “Plastic memory” provides secure closure.

Fluoroplastic

Article No.	Piston Diameter	Loop ID	Functional Length	Article No.	Piston Diameter	Loop ID	Functional Length
EG140074	0.6 mm	0.6 mm	3.50 mm	EG140066	0.8 mm	0.6 mm	4.00 mm
EG140076	0.6 mm	0.6 mm	4.00 mm	EG140068	0.8 mm	0.6 mm	4.50 mm
EG140078	0.6 mm	0.6 mm	4.50 mm	EG140070	0.8 mm	0.6 mm	5.00 mm
EG140080	0.6 mm	0.6 mm	5.00 mm	EG140072	0.8 mm	0.6 mm	6.00 mm
EG140082	0.6 mm	0.6 mm	6.00 mm	EG140456	0.6 mm	0.8 mm	6.00 mm

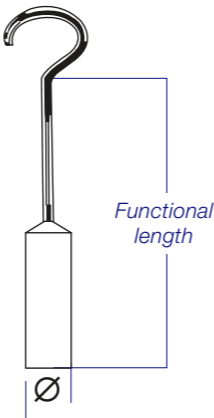


Schuknecht Pistons

Designed for incus attachment. Wire loop locks on long process of the incus. A graft may be placed around piston to seal the oval window.

Stainless Steel/Fluoroplastic

Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG140120	0.6 mm	3.00 mm	EG140131-ENT	0.6 mm	5.75 mm
EG140121	0.6 mm	3.25 mm	EG140102	0.8 mm	3.50 mm
EG140122	0.6 mm	3.50 mm	EG140103	0.8 mm	3.75 mm
EG140123-ENT	0.6 mm	3.75 mm	EG140104	0.8 mm	4.00 mm
EG140124-ENT	0.6 mm	4.00 mm	EG140105	0.8 mm	4.25 mm
EG140125-ENT	0.6 mm	4.25 mm	EG140106	0.8 mm	4.50 mm
EG140126-ENT	0.6 mm	4.50 mm	EG140107-ENT	0.8 mm	4.75 mm
EG140127	0.6 mm	4.75 mm	EG140108	0.8 mm	5.00 mm
EG140128	0.6 mm	5.00 mm	EG140110-ENT	0.8 mm	5.50 mm
EG140129-ENT	0.6 mm	5.25 mm			
EG140130-ENT	0.6 mm	5.50 mm			

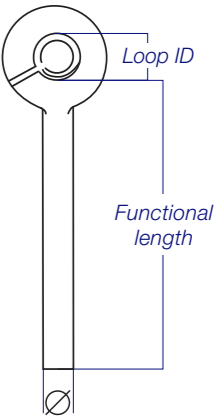


Causee Pistons

Loop is expanded with a pick to slip over the incus with smooth jaw alligator forceps. “Plastic memory” provides secure closure.

Fluoroplastic

Article No.	Piston Diameter	Loop ID	Functional Length
EG140457	0.4 mm	0.6 mm	6.00 mm

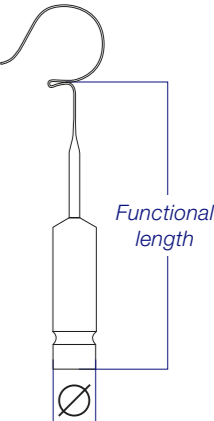


Mangham Pistons

The unique crimp in the wire loop coupled with the shepherd crook assists the surgeon in positioning and crimping the prosthesis onto the incus. 0.50 mm hash mark assists in proper seating into stapedotomy.

Fluoroplastic / Platinum

Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG70145950	0.6 mm	4.00 mm	EG70145952	0.6 mm	4.50 mm
EG70145951	0.6 mm	4.25 mm	EG70145953	0.6 mm	5.00 mm

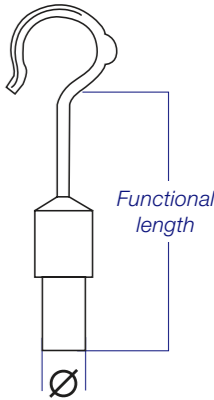


Velegrakis Pistons

The flattened tab on the loop enables easier grasping and positioning. The FLPL shaft has two different diameters to enhance visualization and reduce the risk of the implant protruding into the vestibule.

Fluoroplastic / Platinum

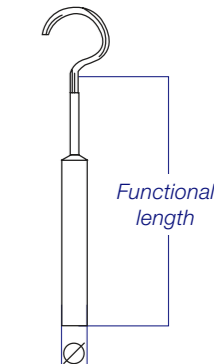
Article No.	Corpis Dual Upper	Diameters Lower	Functional Length	Article No.	Corpis Dual Upper	Diameters Lower	Functional Length
EG70140392	0.8 mm	0.6 mm	4.25 mm	EG70140393	0.8 mm	0.6 mm	4.50 mm



Sanna Pistons

Fluoroplastic Platinum Trimmable to Length

Article No.	Piston Diameter	Functional Length
EG70140797	0.5 mm	6.00 mm

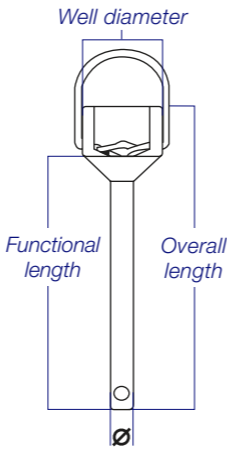


CUP PISTONS

Lippy Modified Stapes Prostheses

Designed to be used when the lenticular process of the incus is missing. This modified prosthesis has a portion of the well removed, allowing the eroded long process to enter from the side.

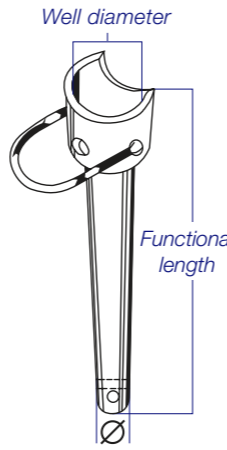
Titanium				
Article No.	Piston Diameter	Functional Length	Overall Length	Well Diameter
EG70142154	0.4 mm	3.65 mm	4.50 mm	1.0 mm
EG70142155	0.4 mm	4.15 mm	5.00 mm	1.0 mm
EG70142156	0.4 mm	4.65 mm	5.50 mm	1.0 mm
EG70142157	0.4 mm	5.15 mm	6.00 mm	1.0 mm



Richards Bucket Handle Prostheses

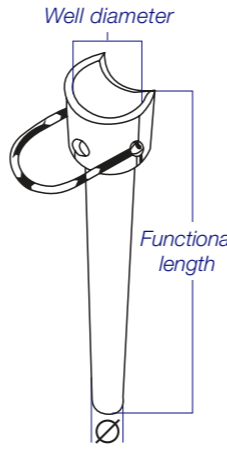
A clinically proven piston design in a well-tolerated material — titanium. The radiused opening of the “bucket” of the prosthesis is modified to allow the incus to assume its correct anatomical position, minimizing the danger of pressure necrosis. The bucket handle fits easily over the lenticular process, eliminating any need for crimping and the postoperative chances of pressure necrosis. The bucket handle prosthesis fits either the left or right ear. A hole in the posterior bucket allows for pick insertion to aid in positioning.

Titanium				A			
Article No.	Piston Diameter	Functional Length	Well Diameter	Article No.	Piston Diameter	Functional Length	Well Diameter
EG70142158	0.4 mm	3.50 mm	1.0 mm	EG70142163	0.6 mm	3.50 mm	1.0 mm
EG70142159	0.4 mm	4.00 mm	1.0 mm	EG70142164	0.6 mm	4.00 mm	1.0 mm
EG70142160	0.4 mm	4.25 mm	1.0 mm	EG70142165	0.6 mm	4.25 mm	1.0 mm
EG70142161	0.4 mm	4.50 mm	1.0 mm	EG70142166	0.6 mm	4.50 mm	1.0 mm
EG70142162	0.4 mm	5.00 mm	1.0 mm	EG70142167	0.6 mm	5.00 mm	1.0 mm



A clinically proven piston design in a well-tolerated material — FLPL. The radiused opening of the “bucket” of the prosthesis is modified to allow the incus to assume its correct anatomical position, minimizing the danger of pressure necrosis. The bucket handle fits easily over the lenticular process, eliminating any need for crimping and the postoperative chances of pressure necrosis. The bucket handle prosthesis fits either the left or right ear. A hole in the posterior bucket allows for pick insertion to aid in positioning.

Fluoroplastic				B			
Article No.	Piston Diameter	Functional Length	Well Diameter	Article No.	Piston Diameter	Functional Length	Well Diameter
EG142148	0.4 mm	3.50 mm	1.0 mm	EG142132	0.6 mm	3.50 mm	1.0 mm
EG142150	0.4 mm	4.00 mm	1.0 mm	EG142134	0.6 mm	4.00 mm	1.0 mm
EG142152	0.4 mm	4.50 mm	1.0 mm	EG142136	0.6 mm	4.50 mm	1.0 mm
EG142154	0.4 mm	5.00 mm	1.0 mm	EG142138	0.6 mm	5.00 mm	1.0 mm

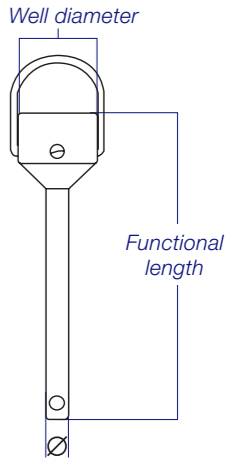


Classic Stapes Prostheses

A clinically proven piston design in a well-tolerated material — titanium. The opening in the “bucket” of the prosthesis is modified to allow the incus to assume its correct anatomical position, minimizing the danger of pressure necrosis. The bucket handle fits easily over the lenticular process, eliminating any need for crimping and the postoperative chances of pressure necrosis. The bucket handle prosthesis fits either the left or right ear. A hole in the posterior bucket allows for pick insertion to aid in positioning. Two transaxial holes in the distal end of the prosthesis stem allow for tissue ingrowth to aid in the stabilization of the implant.

Titanium							
Article No.	Piston Diameter	Functional Length	Well Diameter	Article No.	Piston Diameter	Functional Length	Well Diameter
EG70142141	0.4 mm	4.00 mm	1.0 mm	EG70142148	0.6 mm	4.25 mm	0.9 mm
EG70142142	0.4 mm	4.00 mm	0.9 mm	EG70142149	0.6 mm	4.50 mm	0.9 mm
EG70142143	0.6 mm	4.00 mm	1.0 mm	EG70142150	0.4 mm	5.00 mm	1.0 mm
EG70142144	0.6 mm	4.00 mm	0.9 mm	EG70142151	0.4 mm	5.00 mm	0.9 mm
EG70142145	0.4 mm	4.50 mm	1.0 mm	EG70142152	0.6 mm	5.00 mm	1.0 mm
EG70142146	0.4 mm	4.50 mm	0.9 mm	EG70142153	0.6 mm	5.00 mm	0.9 mm
EG70142147	0.6 mm	4.50 mm	1.0 mm				

<b>Piston Diameter:</b>		<b>Well Diameter:</b>	
Narrow: 0.4 mm	Standard: 0.6 mm	Standard: 0.9 mm	Large: 1.0 mm



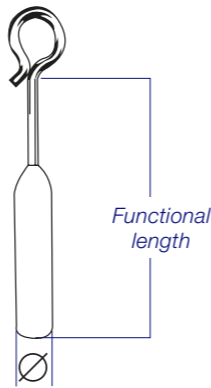
SMART NITINOL TECHNOLOGIES PISTONS

SMart Pistons

These pistons, with the shaft in FLPL and the hook in nitinol, are designed for incus attachment. The Piston wire safely and securely fashions itself around the long process of the incus when heat is applied, facilitating the wire crimp by minimizing the potential for under-crimping and over-crimping.

Nitinol / Fluoroplastic					
Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG70142168	0.4 mm	3.5–5.25 mm*	EG70145927	0.6 mm	4.25 mm
EG70145920	0.5 mm	3.75 mm	EG70145928	0.6 mm	4.50 mm
EG70145921	0.5 mm	4.00 mm	EG70145929	0.6 mm	4.75 mm
EG70145922	0.5 mm	4.25 mm	EG70145930	0.8 mm	3.75 mm
EG70145923	0.5 mm	4.50 mm	EG70145931	0.8 mm	4.00 mm
EG70145924	0.5 mm	4.75 mm	EG70145932	0.8 mm	4.25 mm
EG70145925	0.6 mm	3.75 mm	EG70145933	0.8 mm	4.50 mm
EG70145926	0.6 mm	4.00 mm	EG70145934	0.8 mm	4.75 mm

\*trimmable

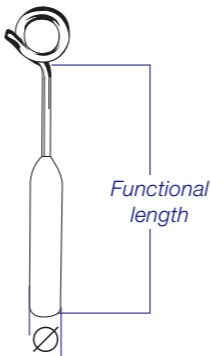


SMart 360° Pistons

As with the standard SMart piston, the nitinol hook self-crimps over the long process of the incus when heat is applied. In this case the hook reaches 360 degrees around the long process with improved attachment of the prosthesis.

Nitinol / Fluoroplastic					
Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG70143645	0.4 mm	3.5–5.25 mm*	EG70143662	0.6 mm	4.25 mm
EG70143652	0.5 mm	4.25 mm	EG70143665	0.6 mm	4.50 mm
EG70143655	0.5 mm	4.50 mm	EG70143667	0.6 mm	4.75 mm
EG70143657	0.5 mm	4.75 mm			

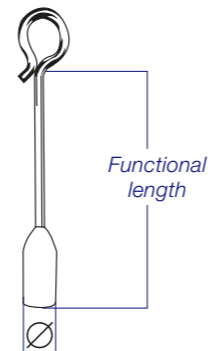
\*trimmable



SMart de la Cruz Pistons

A shorted FLPL shaft offers improved visibility during placement. As with the standard SMart piston, the nitinol wire securely fashions itself around the incus when heat is applied, facilitating the wire crimp by minimizing the potential for under-crimping and over-crimping.

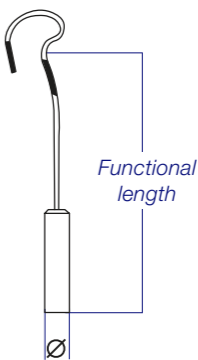
Nitinol / Fluoroplastic					
Article No.	Piston Diameter	Functional Length	Article No.	Piston Diameter	Functional Length
EG70142056	0.6 mm	4.00 mm	EG70142058	0.6 mm	4.50 mm
EG70142057	0.6 mm	4.25 mm	EG70142059	0.6 mm	4.75 mm



SMart Malleus to Footplate Pistons

Specially designed for stapes revision, the piston wire securely fashions itself around the malleus when heat is applied, facilitating the wire crimp by minimizing the potential for under-crimping and over-crimping.

Nitinol / Fluoroplastic		
Article No.	Piston Diameter	Functional Length
EG70142037	0.6 mm	5.50 mm
EG70142038	0.6 mm	6.00 mm
EG70142039	0.6 mm	6.50 mm



**!** SMart piston technology uses nitinol – a heat-activated shape-memory metal alloy



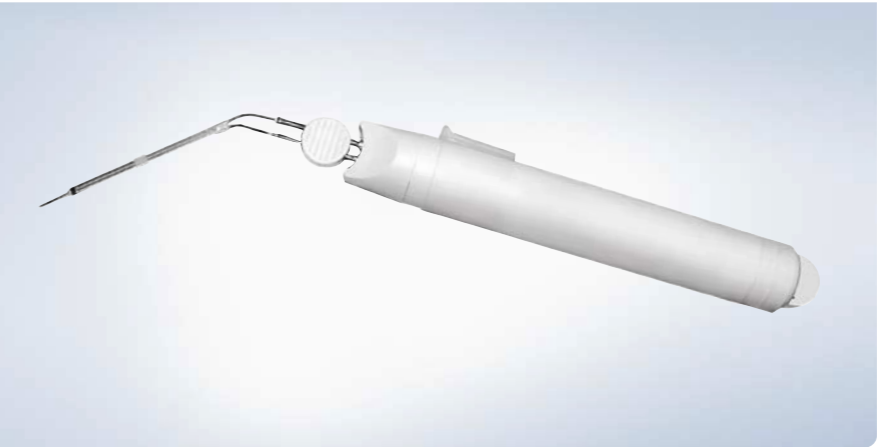
STAPES IMPLANTS

SMart Piston Heating Device

For Use with SMart Pistons

This heating device features a reusable battery-powered handle and disposable thermal tips. It provides just the right amount of heat to close the nitinol hook, minimizing the risk of damage caused by overheating.

Nitinol / Fluoroplastic		
Article No.	Description	Units per Box
EG70131012	SMart thermal handle with AA battery	1
EG70131013	SMart thermal tip and drape	6 of each

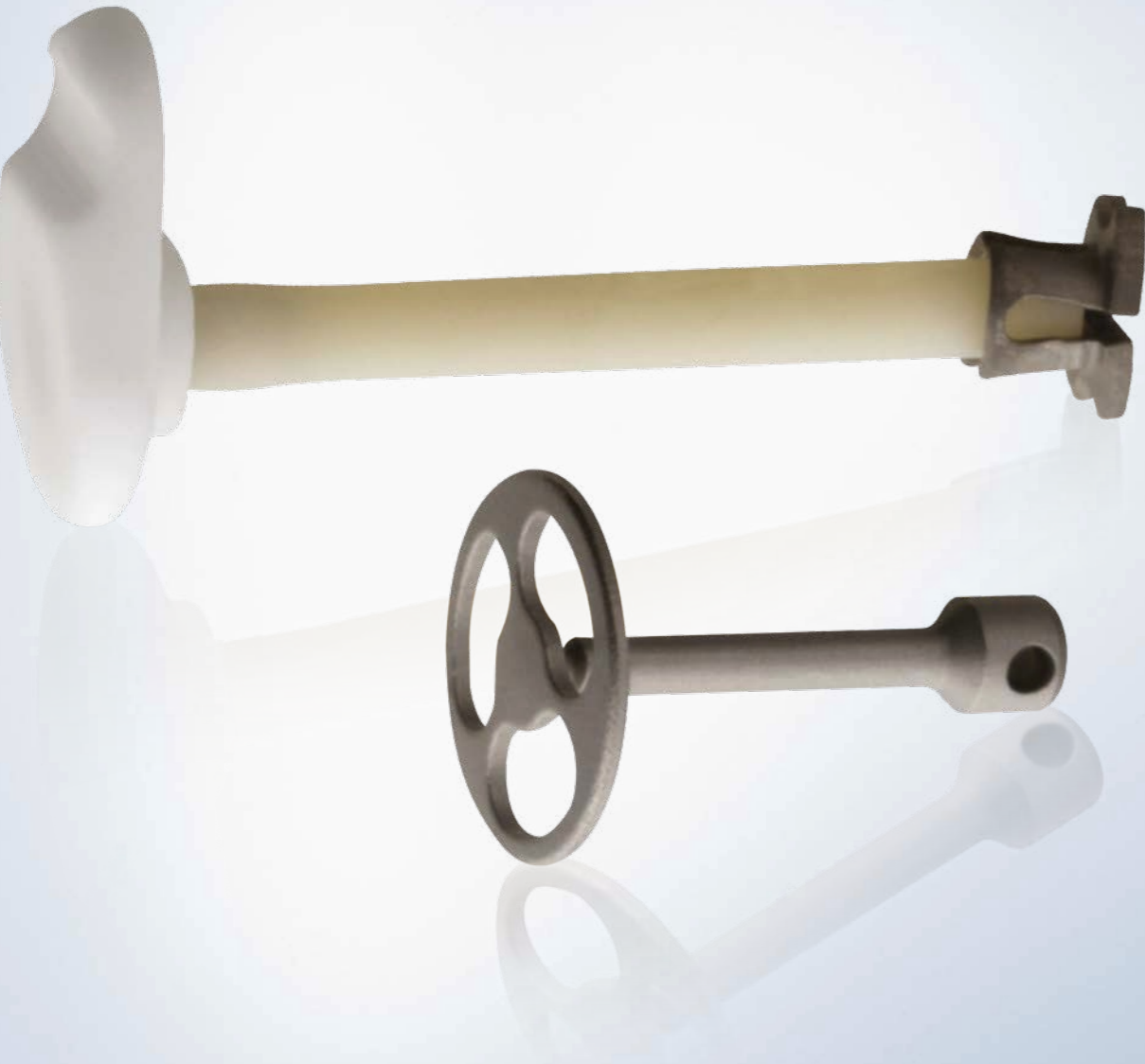


OCR PROSTHESES

Only Olympus Offers Complete OCR Surgery Solutions

Olympus works in conjunction with leading global otologic surgeons to provide the most unique and innovative solutions for middle ear stability.

This complete line of solutions includes: Micron titanium implants, OtoMimix HA bone cement, durable, German-crafted EXPLORENT instruments, the Dornhoffer Implant System, and the Kartush Strut System.



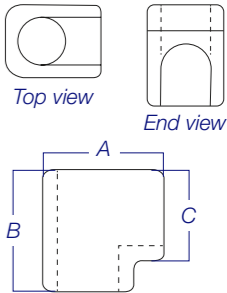
ISJ SOLUTIONS

Applebaum Incudostapedial Joint Prosthesis

The hydroxylapatite oval head is designed to minimize extrusion by eliminating any sharp edges. Easily trimmable Plasti-Pore or fluoroplastic shafts reduce OR inventory needs and are cannulated to accommodate the stapes capitulum.

Hydroxylapatite Material

Article No.	Description	Dimensions	Fully Cannulated	Article No.	Description	Dimensions	Fully Cannulated
EG140956	Small	"A" 2.0 mm	1.0 mm	EG140957	Large	"A" 2.5 mm	1.0 mm
		"B" 2.0 mm	1.0 mm			"B" 2.0 mm	1.0 mm
		"C" 1.2 mm	1.0 mm			"C" 1.2 mm	1.0 mm

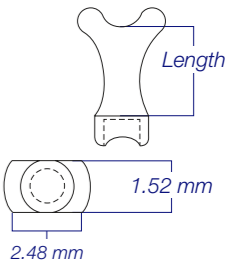


Applebaum Incus Replacement System

Designed to resemble a carved homograft/autograft incus interposition implant. The shaft is partially cannulated to fit on the stapes capitulum, and the carved "notch" is designed to engage the malleus handle.

Hydroxylapatite Material, Partially Cannulated

Article No.	Length	Article No.	Length
EG140970	2.00 mm	EG140973	3.00 mm
EG140971	2.25 mm	EG140974	3.50 mm
EG140972	2.50 mm		



OCR SOLUTIONS

Black Oval-Top PORP Prosthesis

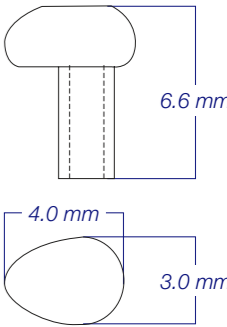
The hydroxylapatite oval head is designed to minimize extrusion by eliminating any sharp edges. Easily trimmable Plasti-Pore or fluoroplastic shafts reduce OR inventory needs and are cannulated to accommodate the stapes capitulum.

Hydroxylapatite Head and Plasti-Pore Shaft

Article No.	Description	Length	Partially Cannulated
EG140859	4 × 3 mm head	6.6 mm	1.15 mm

Hydroxylapatite Head and Fluoroplastic Shaft

Article No.	Description	Length	Partially Cannulated
EG140857	4 × 3 mm head	6.6 mm	1.15 mm



OCR SOLUTIONS

Black Oval-Top TORP Prosthesis

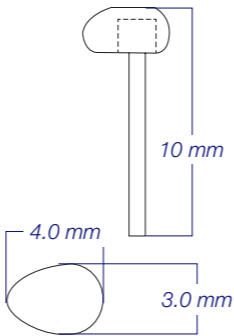
The hydroxylapatite oval head is designed to minimize extrusion by eliminating any sharp edges. Easily trimmable Plasti-Pore or fluoroplastic shafts reduce OR inventory needs.

Hydroxylapatite Head and Plasti-Pore Shaft

Article No.	Description	Shaft Diameter	Shaft Length
EG140858	4 × 3 mm head	0.8 mm	10.0 mm

Hydroxylapatite Head and Fluoroplastic Shaft

Article No.	Description	Shaft Diameter	Shaft Length
EG140856	4 × 3 mm head	0.8 mm	10.0 mm

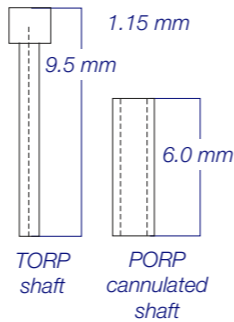


Black Oval-Top Universal Prosthesis

Modular design minimizes OR inventory by including both a PORP and TORP shaft which can be assembled in the prosthesis head. Shafts may be trimmed to length as necessary.

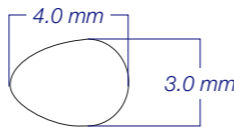
Hydroxylapatite Head and Plasti-Pore Shaft

Article No.	Description	Shaft Diameter	Shaft Length
EG140861	Head 4 × 3 mm hydroxylapatite	TORP, not cannulated, 0.8 mm PORP, cannulated, 1.15 mm	TORP, 9.5 mm, Plasti-Pore PORP, 6.0 mm, Plasti-Pore



Hydroxylapatite Head and Fluoroplastic Shaft

Article No.	Description	Shaft Diameter	Shaft Length
EG140860	Head 4 × 3 mm hydroxylapatite	TORP, not cannulated, 0.8 mm, FLPL PORP, cannulated, 1.15 mm, FLPL	TORP, 9.5 mm PORP, 6.0 mm

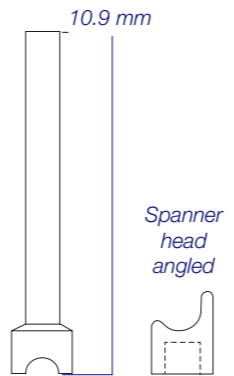


Black Spanner Strut

The Spanner Strut represents a modular approach to incus and incus-stapes replacement. The hydroxylapatite head is designed to cradle the malleus handle and is partially cannulated to fit the shaft. The trimmable fluoroplastic shaft is designed with a cupped end to be positioned over the stapes capitulum when an incus replacement is necessary. For incus-stapes replacement the cupped end is trimmed off, the shaft is positioned on the stapes footplate and the hydroxylapatite cap engages the malleus. The fluoroplastic shaft can also be angled with forceps.

Hydroxylapatite Head and Fluoroplastic Shaft Incus or Incus-Stapes Replacement

Article No.	Cup I.D.	Shaft Diameter	Overall Length
EG140923	1.15 mm	0.8 mm	10.9 mm



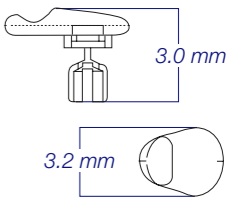
DORNHOFFER

Dornhoffer Interpositional PORP Prosthesis

The titanium cradle provides added stability as it "locks" onto the stapes superstructure. The hydroxylapatite notch head accommodates the malleus.

Hydroxylapatite Head, Titanium Head Cradle

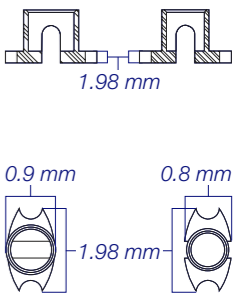
Article No.	Head Diameter	Overall Length	Overall Length with Cradle
EG70141014	3.2 mm	3.0 mm	2.0 mm



Dornhoffer Micron Titanium Footplate Shoes

Hydroxylapatite Head, Titanium Head Cradle

Article No.	Shoe Inner Diameter	Overall Length	Adds to Implant Length
EG70143253	0.9 mm	1.98 mm	0.25 mm
EG70143254	0.8 mm	1.98 mm	0.25 mm



GOLDENBERG

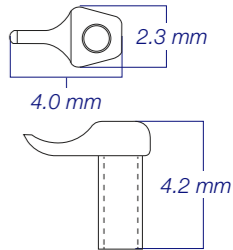
Goldenberg Incus Prosthesis

Goldenberg incus prosthesis is made with a hydroxylapatite head designed with a "hook" to be rotated inferiorly or superiorly along the length of the malleus handle.

It includes a centering hole to have a view to the stapes capitulum during positioning and the Plasti-Pore shaft may be trimmed to exact length and notched for the stapedius tendon.

Hydroxylapatite Head and Plasti-Pore Shaft

Article No.	Description	Length	Fully Cannulated
EG140912	HA head, Plasti-Pore shaft	4.2 mm	1.14 mm

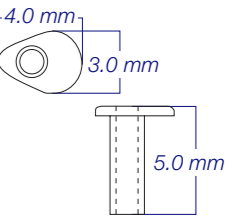


Goldenberg PORP Prosthesis

The Goldenberg PORP prosthesis has a wedge-shaped hydroxylapatite head that conforms to the tympanic membrane. It is fully cannulated to visualize the stapes capitulum during insertion and the Plasti-Pore shaft is trimmable and can be notched for the stapedius tendon.

Hydroxylapatite Head and Plasti-Pore Shaft

Article No.	Description	Length	Fully Cannulated
EG140916	HA head, Plasti-Pore shaft	5.5 mm	1.14 mm

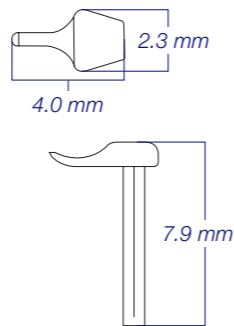


GOLDENBERG

Goldenberg Incus-Stapes Prosthesis

The hydroxylapatite head designed with “hook” may be rotated inferiorly or superiorly along the length of the malleus handle. The wire-reinforced Plasti-Pore shaft is easily trimmed to length and provides stability and memory for bending to proper angulation.

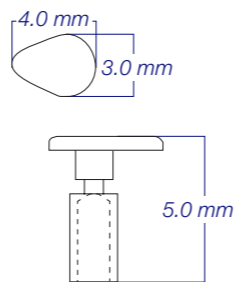
Hydroxylapatite Head and Plasti-Pore Shaft			
Article No.	Description	Shaft Diameter	Length
EG140913	HA head, Plasti-Pore shaft with wire reinforcement	0.8 mm	7.9 mm



Goldenberg Malleable PORP Prosthesis

The wedge-shaped, hydroxylapatite head is versatile and may be used if malleus is present but rotated anteriorly. Malleable shaft allows proper angulation against the drum and can be easily trimmed to length.

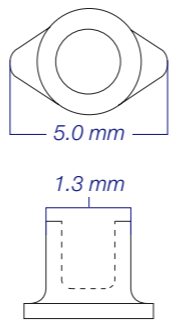
Hydroxylapatite Head and Plasti-Pore Shaft			
Article No.	Description	Length	Fully Cannulated
EG140964	HA head, malleable Plasti-Pore shaft	5.1 mm	1.14 mm



Goldenberg SHOE Prosthesis

This dense hydroxylapatite shoe prosthesis is designed to replace the stape footplate. The cannulated part can host prostheses with diameters up to 0.8 mm (like 140913 and 140917).

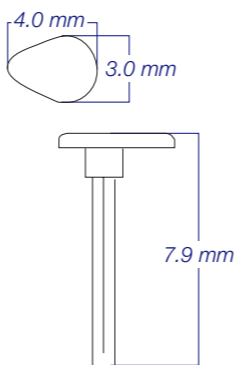
Dense Hydroxylapatite Material			
Article No.	Outer Diameter	Partially Cannulated	Adds to Implant Length
EG140914	1.3 mm	0.8 mm	0.5 mm



Goldenberg TORP Prosthesis

The wedge-shaped head may be used when the malleus is not present or is extremely anteriorly rotated. The Plasti-Pore shaft is easily trimmed and is wire-reinforced for increased stability.

Dense Hydroxylapatite Material			
Article No.	Description	Shaft Diameter	Length
EG140917	HA head, Plasti-Pore shaft with wire reinforcement	0.8 mm	7.9 mm

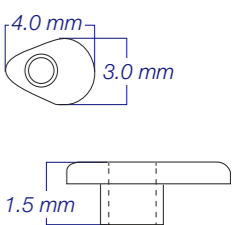


GOLDENBERG

Goldenberg CAP Prosthesis

Dense hydroxylapatite cap sold separately, to be used in shallow middle ear spaces.

Hydroxylapatite Material			
Article No.	Description	Shaft diameter	Length
EG140963	HA Material	0.8 mm	7.9 mm

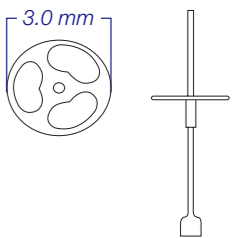


MICRON TITANIUM

Micron Adjustable Titanium TORP and PORP

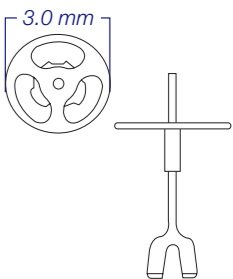
The Micron adjustable titanium TORP features an open-head design for optimal visualization. Its adjustable nature allows for minimal stocking levels.

Titanium					
Article No.	Head	Range	Article No.	Head	Range
EG70141044	Centered TORP	2–10 mm	EG70141046	Centered PORP	2–5 mm
EG70141045	Off-centered TORP	2–10 mm	EG70141047	Off-centered PORP	2–5 mm



Micron Adjustable Titanium Accessories

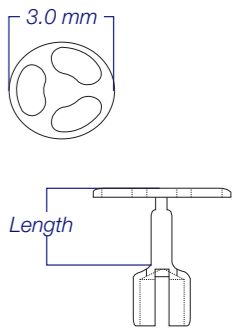
Titanium			
Article No.	Description	Article No.	Description
EG70135802	Micron adjustable sizing block	WT212930	Needle holder, acc. to Ryder, micro, with tungsten carbide, size 130



Micron all-Titanium Monolithic Centered PORP

The monolithic PORPs come pre-sized so that the surgeon does not need to trim the prosthesis. The open-head design allows for good visualization.

Titanium, Tilttable Head			
Article No.	Head Diameter	Cradle Functional Diameter	Functional Length
EG70142004	3.0 mm	1.0 mm	2.0 mm
EG70142028	3.0 mm	1.0 mm	2.5 mm
EG70142005	3.0 mm	1.0 mm	3.0 mm
EG70142029	3.0 mm	1.0 mm	3.5 mm
EG70142006	3.0 mm	1.0 mm	4.0 mm
EG70142036	3.0 mm	1.0 mm	1.5 mm

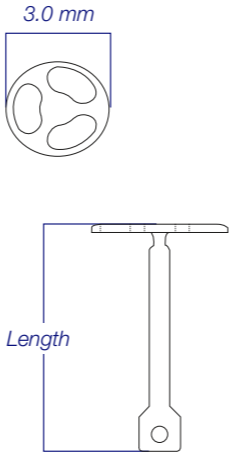


MICRON TITANIUM

Micron All-Titanium Monolithic Centered TORP

The monolithic PORPs come pre-sized so that the surgeon does not need to trim the prosthesis. The open-head design allows for good visualization.

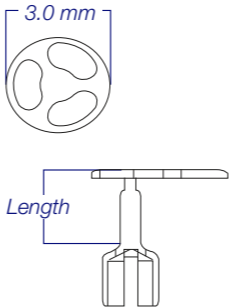
Titanium, Tiltable Head			
Article No.	Head Diameter	Round Foot-plate Shoe Diameter	Overall Length
EG70142010	3.0 mm	0.9 mm	4.0 mm
EG70142011	3.0 mm	0.9 mm	4.5 mm
EG70142012	3.0 mm	0.9 mm	5.0 mm
EG70142013	3.0 mm	0.9 mm	5.5 mm
EG70142014	3.0 mm	0.9 mm	6.0 mm
EG70142015	3.0 mm	0.9 mm	6.5 mm
EG70142016	3.0 mm	0.9 mm	7.0 mm



Micron All-Titanium Monolithic Centered PORP

The monolithic PORPs come pre-sized so that the surgeon does not need to trim the prosthesis. The open-head design allows for good visualization.

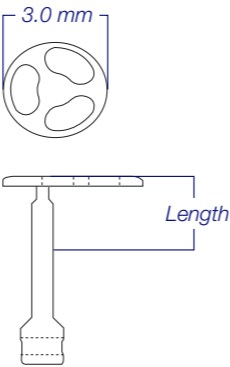
Titanium, Tiltable Head			
Article No.	Head Diameter	Cradle Functional Diameter	Functional Length
EG70142007	3.0 mm	0.9 mm	2.0 mm
EG70142030	3.0 mm	0.9 mm	2.5 mm
EG70142008	3.0 mm	0.9 mm	3.0 mm



Micron All-Titanium Monolithic Off-Centered TORP

The Monolithic PORPs come pre-sized so that the surgeon does not need to trim the prosthesis. The open-head design allows for good visualization and the tiltable head helps to find the right angle between the tympanic membrane and stape footplate.

Titanium, Tiltable Head			
Article No.	Head Diameter	Cradle Functional Diameter	Functional Length
EG70142019	3.0 mm	0.9 mm	4.0 mm
EG70142020	3.0 mm	0.9 mm	4.5 mm
EG70142021	3.0 mm	0.9 mm	5.0 mm
EG70142022	3.0 mm	0.9 mm	5.5 mm
EG70142023	3.0 mm	0.9 mm	6.0 mm



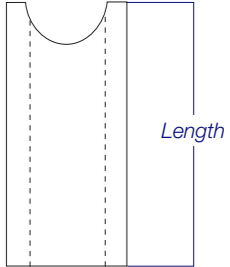
Article No.	Head Diameter	Round Foot-plate Shoe Diameter	Overall Length
EG70142017	3.0 mm	0.9 mm	7.5 mm
EG70142018	3.0 mm	0.9 mm	8.0 mm
EG70142032	3.0 mm	0.9 mm	2.0 mm
EG70142033	3.0 mm	0.9 mm	2.5 mm
EG70142034	3.0 mm	0.9 mm	3.0 mm
EG70142035	3.0 mm	0.9 mm	3.5 mm

KARTUSH

Kartush Incus Strut Prostheses

This dense hydroxylapatite strut was designed to bridge the gap between the malleus handle and the capitulum of the stapes. The shaft is fully cannulated for improved visualization and for engaging the capitulum.

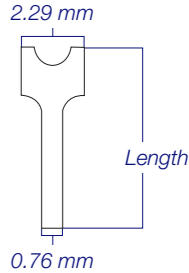
Hydroxylapatite Material			
Article No.	Description	Overall Length	Fully Cannulated
EG140853	Short	2.75 mm	1.17 mm
EG140854	Medium	3.9 mm	1.17 mm
EG140855	Long	4.9 mm	1.17 mm



Kartush Incus-Stapes Strut Prostheses

This dense hydroxylapatite strut was designed to bridge the gap between the malleus handle and stapes footplate. May be trimmed in length.

Hydroxylapatite Material			
Article No.	Description	Overall Length	Fully Cannulated
EG140850	Short	0.76 mm	5.13 mm
EG140851	Medium	0.76 mm	7.10 mm
EG140852	Long	0.76 mm	9.96 mm

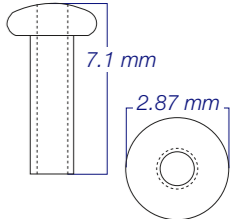


SHEEHY

Sheehy PORP Prosthesis

The Sheehy modified PORP prosthesis features a smaller diameter flange than the standard PORP prosthesis, which allows easier introduction and better visual contact with the stapes. The cannulated shaft of the prosthesis is designed to be firmly seated on the capitulum of the stapes to aid in visualization of the stapes, and can be trimmed to the desired length.

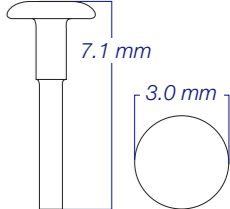
Plasti-Pore Material			
Article No.	Head Diameter	Shaft Diameter	Overall Length
EG70140934	2.87 mm	5.0 mm	1.17 mm



Sheehy TORP (Improved) Prosthesis

Designed to replace the entire ossicular chain, the Sheehy TORP prosthesis features a smaller diameter flange than the standard TORP prosthesis. The entire TORP prosthesis is made of Plasti-PoreR material. The shaft can be trimmed to the desired length.

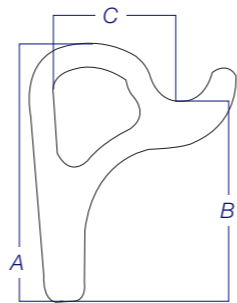
Plasti-Pore Material			
Article No.	Head Diameter	Shaft Diameter	Overall Length
EG70140933	3 mm	0.8 mm	7.0 mm



Wehrs II Incus-Stapes System – Single Notch

Wehrs II features a cutout in the head of the prosthesis, which adds increased strength and handling characteristics.

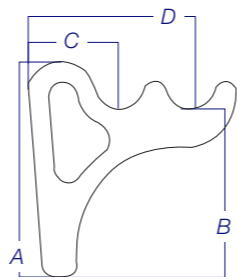
Article No.	Description	Dimensions		
		A	B	C
EG70140982	0.9 mm shaft, short	5.3 mm	4.1 mm	2.5 mm
EG70140983	0.9 mm shaft, average	6.3 mm	5.2 mm	2.5 mm
EG70140984	0.9 mm shaft, medium	7.3 mm	6.1 mm	2.5 mm
EG70140985	0.9 mm shaft, long	10.2 mm	9.0 mm	2.5 mm



Wehrs II Incus-Stapes System – Double Notch

Wehrs II features a cutout in the head of the prosthesis, which adds increased strength and handling characteristics.

Article No.	Description	Dimensions			
		A	B	C	D
EG70140986	0.9 mm shaft, short	5.3 mm	4.1 mm	1.6 mm	3.5 mm
EG70140987	0.9 mm shaft, average	6.3 mm	5.2 mm	1.6 mm	3.5 mm
EG70140988	0.9 mm shaft, medium	7.3 mm	6.1 mm	1.6 mm	3.5 mm
EG70140989	0.9 mm shaft, long	10.2 mm	9.0 mm	1.6 mm	3.5 mm



OCR ACCESSORIES

Ossicular Replacement Prosthesis Measuring Trial Accessories

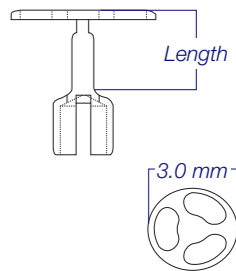
Stainless Steel, Not for Implantation, Used for Customised Sizing	
Article No.	Description
EG70135060	Sterilization case for PORP/TORP stainless-steel trials
EG70135802	Micron titanium adjustable sizing block
EG70135801	Universal cutting block designed for use with HAPEX shafts
WT212930	Needle holder, acc. to Ryder, micro, with tungsten carbide, size 130

OCR ACCESSORIES

Ossicular Replacement Prosthesis Measuring PORP Trials

This intraoperative measuring device assists the surgeon in determining the appropriate implant length.

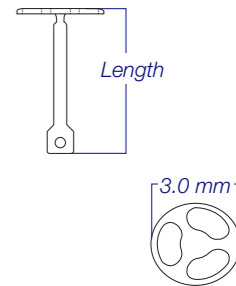
Stainless Steel, Not for Implantation, Used for Customized Sizing			
Article No.	Functional Length	Article No.	Functional Length
EG70131321	2 mm	EG70131323	4 mm
EG70131322	3 mm		



Ossicular Replacement Prosthesis Measuring TORP Trials

This intraoperative measuring devices assist the surgeon in determining the appropriate implant length.

Stainless Steel, Not for Implantation, Used for Customized Sizing			
Article No.	Functional Length	Article No.	Functional Length
EG70131350	4 mm	EG70131354	6 mm
EG70131352	5 mm	EG70131356	7 mm



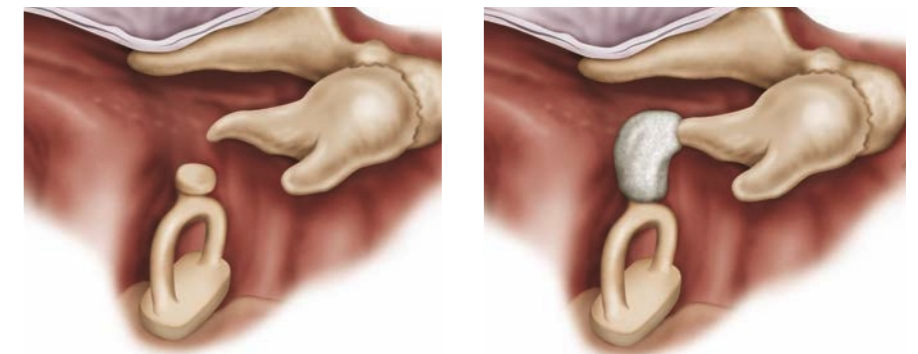
## Easy, Rapid, Stable, and Safe Management of Ossiculoplasty

- Gap the bridge – the solution for IS joint discontinuity
- Minimize revisions with better stability – additional safety with OtoMimix, e.g. stabilizing loop of the piston, ensuring stability of the prosthesis to the malleus
- Safety/biocompatibility – the only hydroxylapatite cement especially made for middle ear procedures, providing unconditional biocompatibility
- Saves time – easy preparation and rapid hardening means faster procedure time



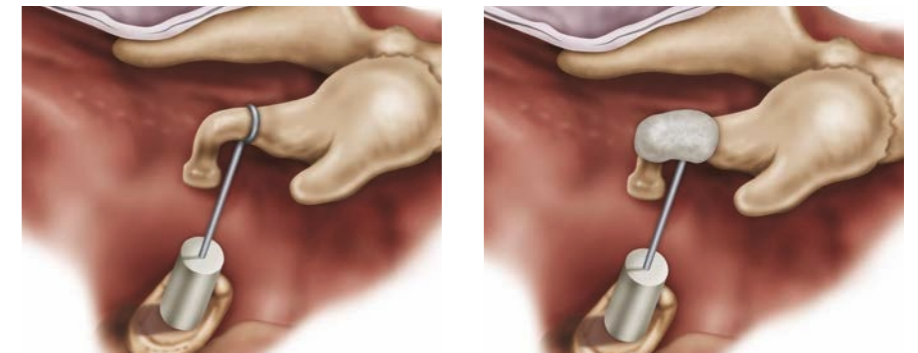
## Incudostapedial Joint Discontinuity

Reconstruct the conductive component by placing a small aliquot of OtoMimix HA cement on the discontinuity.



## Stabilising the Crimped Loop onto the Incus

If concerned about the piston loop lifting off the incus, lock it down with a small aliquot of OtoMimix.



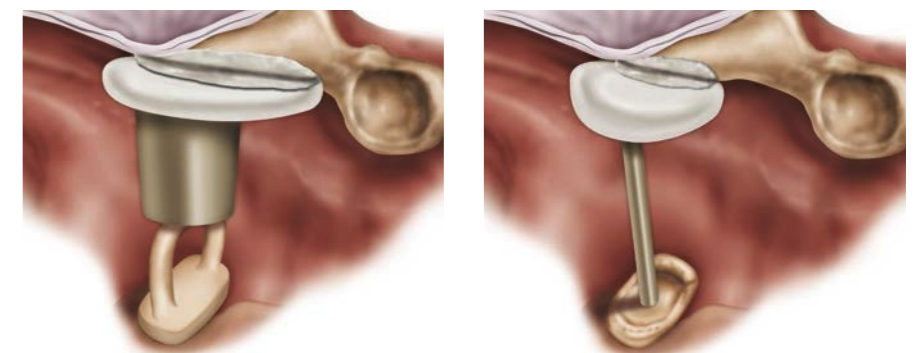
## Revision Stapes Replacement Due to Incus Erosion

Keep the prosthesis properly positioned around the vestibule by extending and connecting the piston loop and the distal incus remnant.



## No More Prop and Pray

Maximize columella prosthesis stability with an OtoMimix interface, connecting the prosthesis head to the malleus (TORP or PORP).



## OTOMIMIX

## Instruments

Article No.	Description
<b>EG130003</b>	Richards Posigator straight serrated positive locking jaws 4.0 mm, 70.0 mm ebony
<b>EG130004</b>	Richards Posigator straight smooth positive locking jaws 4.0 mm, 70.0 mm ebony
<b>EG130725</b>	Richards Rosen sharp needle disposable box
<b>EG130726</b>	Richards Rosen blunt needle disposable box
<b>WT250005</b>	Rosen round knife 45°, knife diameter = 1.5 mm
<b>WT254200</b>	Wullstein needle, slightly curved, 16.5 cm
<b>WT253500</b>	Wullstein knife, straight
<b>WT251500</b>	Plester flab knife for incision, 2.5 mm
<b>WT255006</b>	Micro pick 90°, 0.6 mm, 16.5 cm
<b>WT272601</b>	House curette, 17 cm, oval cups, 1.1 × 1.5 / 1.3 × 1.8 mm
<b>WT276614</b>	Joseph scissors, 14.0 cm, sharp, curved
<b>WT272200</b>	Helms forceps, pointed, atraumatic 15.0 cm
<b>WT200011</b>	Wullstein retractor, 11.0 cm, 3 × 3 prongs, sharp
<b>WT127002</b>	Hartmann ear forceps, cup 2.0 mm diameter
<b>WT279500</b>	Micro cup-shaped forceps oval, straight
<b>WT280500</b>	Micro ear forceps, serrated 0.8 × 4.0 mm, straight
<b>WT278000</b>	Bellucci micro scissors delicate, blades 4.0 mm
<b>WT283003</b>	Dieter malleus nipper, upbiting punch, 8.0 cm
<b>WT285000</b>	McGee wire crimper 0.8 × 3.5 mm
<b>WT269900</b>	Stapes microsurgical gauge

## Middle Ear Cement

Article No.	Description	Article No.	Description
EG70143266	OtoMimix (2 grams)	EG911101	HA granules 0.5–1.0 mm

## Mastoid Cavity Filling

Article No.	Description
EG911101	HA granules 0.5–1.0 mm

## Packing Solution

Article No.	Description
EG70890860	Blu ear packing with drawstring 12.0 × 15.0 mm in hydrated state
EG140320	Rosette packing, width 4.0 mm, thickness 0.13 mm, length 35.0 mm

## NOTES

[illegible]

# ENT MIDDLE EAR IMPLANTS – REFERENCE GUIDE



Specifications, design, and accessories are subject to change without any notice or obligation on the part of the manufacturer.



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